REGULATION 5.13 Additional Control Standards for Asbestos Removal

Air Pollution Control District of Jefferson County
Jefferson County, Kentucky

Relates To: KRS Chapter 77 Air Pollution Control
Pursuant To: KRS Chapter 77 Air Pollution Control
Necessity And Function: KRS 77.180 provides that the Air Pollution Control Board may make and enforce all needful orders, rules, and regulations necessary or proper to accomplish the purposes of KRS Chapter 77. This regulation provides for the control of asbestos emissions from asbestos abatement projects.

SECTION 1 Applicability

1.1 Except as provided in this section, this regulation applies to each asbestos abatement entity that is involved in any asbestos abatement project.

1.1.1 An asbestos abatement entity shall not be required to obtain the certificate as required in section 3 or attend the training required in section 5 in order to conduct asbestos abatement projects which are not subject to Regulation 5.04; however, that entity shall comply with section 4 when performing such projects.

1.2 Any person may request that the District determine whether a project is an asbestos abatement project. Such a request shall include the type of disturbance involved, a description of the friable asbestos materials, and laboratory data sheets with bulk sample results, methods of analysis, and the signature of the analyst. The District shall make its determination, in writing, not later than ten working days after it has received a written request with complete and accurate information adequate to make a determination.

SECTION 2 Definitions

Terms used in this regulation not defined herein shall have the meaning given to them in Regulations 1.02 and 5.04.

2.1 "Air-lock" means a system of enclosures within the containment area consisting of two doorways, curtained with polyethylene sheeting, at least three feet apart.

2.2 "Asbestos abatement project" means any renovation, demolition, or building clean-up activity at a facility which may cause a disturbance of friable asbestos material.

2.3 "Asbestos abatement entity" means any partnership, firm, association, corporation, sole proprietorship, or other business concern, any governmental agency, or any other organization, composed of one or more employees or members, or any individual involved in any of the asbestos-related activities specified in section 2.2.

2.4 "Building clean-up" means the moving within and/or removal from a building of friable asbestos materials that have fallen or been displaced from their original locations and are being cleaned-up, swept-up, vacuumed, or otherwise transported from their present location not as part of a renovation or demolition.

2.5 "Certificate" means a permit issued by the State pursuant to KRS 224.10-100(19) to allow an asbestos abatement entity to engage in asbestos abatement projects, including the use of equipment or practices that control the emissions of asbestos fibers into the outside air.

2.6 "Clean room" means an uncontaminated area or room which is part of the worker decontamination enclosure system with provisions for storage of workers' street clothes and clean protective equipment.

2.7 "Clearance air monitoring" means the monitoring of air conducted inside the work area after cleanup of an asbestos abatement project has been completed.

2.8 "Containment area" means the entire area in which an asbestos project is conducted; this includes, but is not limited to, the work area, equipment room, shower room, clean room, and all associated air-locks.

2.9 "Demolition" means the wrecking or taking out of any load- supporting structural member of a facility together with any related handling operations.

2.10 "Emergency operation" means a renovation operation that was not planned but results from a sudden, unexpected event. This term includes operations necessitated by non-routine failures of equipment.

2.11 "Equipment room" means a contaminated area or room which is part of the worker decontamination enclosure system with provisions for storage of contaminated clothing and equipment.

2.12 "Facility" means any institutional, commercial, or industrial structure, installation, or building, excluding apartment buildings having no more than four dwelling units.

2.13 "Facility component" means any pipe, duct, boiler, tank, reactor, turbine, or furnace at or in a facility, or any structural member of a facility.

2.14 "Friable asbestos material" means any material containing more than 1% asbestos by weight that hand pressure can crumble, pulverize, or reduce to powder when dry.

2.15 "Glovebag" means a manufactured device consisting of plastic with a thickness of six mils or more; two inward-projecting longsleeve rubber gloves; one inward-projecting waterwand sleeve; an internal tool pouch; and an attached, labeled receptacle for asbestos waste. The glovebag is constructed and installed in such a manner that it surrounds the object or area from which the asbestos containing material is to be removed, and contains all asbestos fibers released during the removal process.

2.16 "Glovebag technique" means a method of removing asbestos from pipes, ducts, valves, joints, and other non-planar surfaces, which uses one or more glovebags.

2.17 "HEPA filtration" means high efficiency particulate air filtration found in respirators and vacuum systems capable of filtering particles greater than or equal to 0.3 microns in size with 99.97% efficiency.

2.18 "HVAC" means a heating, ventilation, and air conditioning system.

2.19 "Lockdown agent" means a protective coating or sealant which is applied to a surface from which asbestos-containing material has been removed.

2.20 "OSHA" means the Occupational Safety and Health Administration.

2.21 "Polyethylene sheeting" or "polyethylene bags" means sheeting or bags of polyethylene plastic with a thickness of six mils or more, except as otherwise specified.

2.22 "Renovation" means altering in any way one or more facility components. Operations in which load-supporting structural members are wrecked or taken out are excluded.

2.23 "Shower room" means a room between the clean room and the equipment room in the worker decontamination enclosure system with hot and cold running water controllable at the tap and suitably arranged for complete showering during decontamination.

2.24 "Structure" means a whole facility, building, or a major portion thereof, such as a building wing.

2.25 "Work area" means the contaminated area within the containment area that contains the friable asbestos material which is to be abated.

SECTION 3 Prohibition

No asbestos abatement entity shall engage in any asbestos abatement project which is subject to the provisions of Regulation 5.04 after April 1, l988, unless:

3.1 A certificate to so engage in such projects has been issued by the Cabinet and is currently in effect. This section shall not apply during the demonstration of compliance required in 401 KAR 63:042 section 6(2); and

3.2 At least one person identified in section 5 is in attendance at the containment area during the execution of the project.

SECTION 4 Work Practice Requirements

Except as specified, the work practice requirements of this section shall apply to asbestos abatement entities which perform the indicated asbestos abatement projects.

4.1 Renovations addressed in Regulation 5.04. Any asbestos abatement entity that engages in any asbestos abatement project, including emergency operations, which is determined to be subject to Regulation 5.04 and involves renovation shall comply with the following work practice requirements:

4.1.1 All objects and exposed surfaces in the work area shall be cleaned. Movable objects may then be removed. Objects not removed from the work area shall be covered with polyethylene sheeting secured in place. All openings within the containment area, including windows, doorways, elevator openings, corridor entrances, drains, ducts, grills, grates, diffusers, skylights, and openings created by the construction of any barriers, shall be sealed with polyethylene sheeting. Containment areas shall be established by permanent walls extending from the floor to the ceiling, or where permanent walls do not exist, by barriers. Barriers shall be constructed of polyethylene sheeting attached securely in place.

4.1.2 Floor sheeting shall be installed within the containment area and shall consist of at least two layers of polyethylene sheeting. Floor sheeting shall extend up sidewalls at least 12 inches and shall be sized to minimize seams. No seams shall be located at wall-to-floor joints.

4.1.3 Wall sheeting shall be installed throughout the containment area according to the procedures specified in this paragraph. All wall sheeting shall consist of polyethylene sheeting, with each layer having a thickness of at least four mils, shall be securely installed to minimize seams, and shall extend beyond each wall-to-floor joint at least 12 inches. No seams shall be located at wall-to-wall joints.

4.1.3.1 Within the work area. Wall sheeting on a permanent wall shall consist of at least two layers. Wall sheeting on a barrier shall consist of at least one layer.

4.1.3.2 Within all other areas of the containment area. Wall sheeting on a permanent wall shall consist of at least one layer. No wall sheeting is required where barriers are used.

4.1.4 A worker decontamination enclosure system shall be provided, consisting of a clean room, shower room, and equipment room, each separated from each other and from the work area by airlocks and accessible through doorways protected with two overlapping polyethylene sheets.

4.1.5 All HVAC equipment in or passing through the containment area shall be shut down, locked out, and tagged to advise personnel not to activate the equipment. All intake and exhaust openings and any seams in system components shall be sealed with polyethylene sheeting and waterproof tape.

4.1.6 Warning signs shall be displayed at all approaches to any location where airborne fiber levels can be expected to exceed background levels. Such signs shall be in a vertical format measuring 20 inches in length and 14 inches in width, and shall contain the following information which shall be printed in letters of sufficient size and contrast as to be readily visible and legible:

DANGER
ASBESTOS
CANCER AND LUNG DISEASE HAZARD
AUTHORIZED PERSONNEL ONLY
RESPIRATORS AND PROTECTIVE CLOTHING
ARE REQUIRED IN THIS AREA

4.1.7 Negative pressure ventilation units with HEPA filtration and in sufficient number to provide one work-place air change every 15 minutes shall be operated continuously for the duration of the project. The duration of the project for this requirement shall be considered to be from the time that a containment area is established and wall and floor sheeting are installed through the time that acceptable final clearance air monitoring results are obtained.

4.1.8 All friable asbestos material shall be thoroughly wetted through to the substrate prior to removal. When an industrial, manufacturing or utility company is removing asbestos containing materials utilizing only its own employees to do the work, wetting will not have to be all the way to the substrate (while the asbestos material is still attached to the substrate) provided:

4.1.8.1 The substrate surface temperature is above 220 ^{0}F and it is not practicable to shut down a process or to wait for cooling to this temperature,

4.1.8.2 Nor when emergency exists and the temperatures in the work area are below 32 ^{0}F.

4.1.9 Facility components shall be removed intact or in large sections whenever possible and shall be carefully lowered to the floor. Other friable asbestos material shall be removed in small sections.

4.1.10 Materials located at heights greater than 15 feet but less than or equal to 50 feet above the floor shall be dropped into inclined chutes or onto scaffolding or containerized at their elevated levels for eventual disposal. For materials located at heights greater than 50 feet above the floor, a dust-tight, enclosed chute shall be constructed to transport removed material to containers on the floor.

4.1.11 At no time shall the friable asbestos material that has been removed be allowed to accumulate or become dry.

4.1.12 For porous surfaces that have been stripped of friable asbestos materials, a lockdown agent shall be applied to securely seal any residual fibers that may be present. The lockdown agent should be chosen so as to be compatible with subsequent covering.

4.1.13 Following abatement, wall sheeting and floor sheeting shall be removed and containerized for disposal. A sequence of HEPA filtration vacuuming, wet wiping all exposed surfaces, and surface drying shall be performed until no visible residue is observed in the work area. A minimum of 24 hours after wet wiping shall be required to ensure that sufficient drying has occurred. When emergency repairs are being made by an industrial, manufacturing, or utility company utilizing only its own employees to do the work, then the 24 hour waiting period is reduced to two hours.

4.1.14 All asbestos-containing waste, except for large facility components, shall be thoroughly wetted before being placed into containers for disposal. Large components shall be thoroughly wetted before being wrapped in polyethylene sheeting for disposal. Disposal shall occur at locations identified in section 4.1.21.

4.1.15 Wet asbestos-containing waste shall be double bagged in polyethylene bags and placed in sealed, rigid containers (for example: steel drums, fiber drums, or heavy cardboard boxes) for transport to the approved landfill identified in section 4.1.21. Large facility components may be wrapped in two layers of polyethylene sheeting which are secured with waterproof tape for disposal.

4.1.16 All polyethylene sheeting, disposable clothing, respirators, filters, or other disposable equipment and supplies used in an asbestos abatement projects, shall be treated as asbestos-containing waste.

4.1.17 All wrapping or containerizing of asbestos-containing waste shall be done in such a manner so as to prevent the outside of the wrapping or container from being contaminated with asbestos fibers.

4.1.18 All packaged waste (boxes, drums, and wrapped components) shall be labeled according to the provisions of 40 CFR section 61.152.

4.1.19 Clearance air monitoring shall be performed. At least five samples of air per work area, or one sample per room, whichever is greater, shall be obtained for the clearance air monitoring. A sample volume of 3,000 liters of air shall be used. The air samples shall be obtained when the air is being artificially circulated so that the fibers remain airborne during the sampling. Barriers shall not be dismantled, and openings shall not be uncovered, until the final samples show total fiber concentrations of less than or equal to 0.01 fibers per cubic centimeter of air. The method for determining compliance with this section shall be either of the methods specified in "Guidance for Controlling Asbestos-Containing Materials in Buildings" (EPA, Office of Pesticides and Toxic Substances, EPA 560/5-85-024, June 1985) Appendix M "Detailed Specifications for Sampling and Analyzing Airborne Asbestos."

4.1.19.1 Copies of Appendix M are available for sale from:

U. S. Government Printing Office
Superintendent of Documents
Mail Stop SSOP
Washington, DC 20402-9328.

4.1.19.2 Copies of Appendix M shall be available for public review at the District.

4.1.20 Transport and disposal of asbestos-containing waste shall occur in a manner that will not permit the release of asbestos fibers into the outside air.

4.1.21 Disposal shall occur at a site that has approval from the Kentucky Division of Waste Management to accept asbestos- containing waste according to Title 401 KAR Chapter 47 and shall meet all other applicable local, state, and federal laws.

4.1.22 The asbestos abatement entity shall submit copies of all results of sampling obtained during clearance air monitoring and all disposal receipts to the building owner and the District.

4.2 Demolitions addressed in Regulation 5.04. Any asbestos abatement entity that engages in any asbestos abatement project which is determined to be subject to this regulation and involves demolition shall comply with the following work practice requirements:

4.2.1 Any demolition of a structure or portion of a structure which contains facility components composed of or covered by friable asbestos material shall be preceded by a removal of all such materials prior to demolition, according to the requirements of section 4.1.

4.2.2 In lieu of the requirements specified in sections 4.1.1, 4.1.2, 4.1.3, 4.1.5, and 4.1.12, asbestos abatement entities engaging in demolition activities may elect to comply with all of the other requirements of section 4.2.2 and the following requirements:

4.2.2.1 Before beginning a demolition project, all doors, windows, floor drains, vents, and other openings to the outside of the building and to areas within the building that do not contain asbestos materials, shall be sealed off with polyethylene sheeting and waterproof tape; and

4.2.2.2 If a structure is to be partially demolished, all HVAC equipment in the demolition area or passing through it but servicing areas of the building which will remain, shall be shut down, locked out, tagged to advise personnel not to activate the equipment, and thoroughly sealed with polyethylene sheeting and waterproof tape.

4.2.3 Clearance air monitoring, as described in section 4.1.19, shall be required, following abatement activities conducted for demolition purposes, prior to demolition.

4.2.4 All other requirements of section 4.1, unless specifically deleted in section 4.2.2, shall apply to demolition abatement activities.

4.3 Any asbestos abatement entity engaged in an asbestos abatement project, including emergency operations, not subject to sections 4.1 and 4.2 shall take reasonable precautions to prevent the release of asbestos fibers to the outside air. Such precautions shall include, but not be limited to:

4.3.1 Construction of adequate barriers or use of wall and floor sheeting to contain asbestos fibers released within the containment area;

4.3.2 Wetting of all friable asbestos materials prior to removal and keeping them wet until containerized;

4.3.3 Use of HEPA filtration vacuum equipment and wet cleaning techniques to clean up the work area following the project until there is no visible residue;

4.3.4 Appropriately wrapping or containerizing asbestos-containing waste and labeling the packaged waste (wrapped components, boxes, or fiber or metal drums); and

4.3.5 Transportation to and disposal at a location identified in section 4.1.21 in a manner that does not release fibers into the outside air.

4.4 In lieu of the work practice requirements of sections 4.1.1 to 4.1.5, 4.1.7, 4.1.9, 4.1.13, 4.1.14, 4.1.16, 4.1.19, 4.2.2 4.2.3, 4.3.1 and 4.3.3, the asbestos abatement entity may elect to use the glovebag technique for an asbestos abatement project. Such technique is an acceptable alternative to those requirements where approved on the permit. The District may, on a case-by-case basis, approve other alternative work practice requirements for an asbestos abatement project provided that the asbestos abatement entity submits the alternative to the requirements to the District in writing prior to beginning the asbestos abatement project, and demonstrates to the satisfaction of the District that compliance with this section is not practical or not feasible and that the proposed alternative to the requirements provides an equivalent control of asbestos not in conflict with any applicable local, state, or federal law, and is approved on the permit.

4.5 All building clean-up activities in buildings (other than dwellings of four units or less) shall comply with the following work practice requirements:

4.5.1 All migrated friable asbestos materials shall be thoroughly wetted before removal or will be removed by a vacuum using HEPA filtration,

4.5.2 Those practices specified in sections 4.1.5, 4.1.6, 4.1.11, 4.1.14, 4.1.15, 4.1.17, 4.1.18, 4.1.20 and 4.1.21, and

4.5.3 Section 4.5 shall apply to all building clean-ups involving 236 cubic centimeters (one cup) or more of friable asbestos materials.

4.6 Any owner or manager of a building (other than a dwelling of four or less units) shall clean up any friable asbestos containing materials that have fallen or otherwise become displaced to the floors or walkways before allowing anyone other than building employees, a consultant hired for purposes of checking for compliance with this regulation, or an employee of the District from entering the area where such friable asbestos materials are on the floor or walkways. If the total displaced friable asbestos materials on floors and walkways in the building or structure is less than 236 cubic centimeters, then this section shall not apply.

SECTION 5 Training Requirements

The asbestos abatement entity shall provide at least one supervisory person with current certification, as specified by 401 KAR 63:042 section 10(1), who will be in attendance during the execution of each asbestos abatement project.

SECTION 6 Records

6.1 Each asbestos abatement entity shall maintain records of all asbestos abatement projects which it performs and shall make these records available to the District upon request. The asbestos abatement entity shall retain the records for at least 30 years.

6.2 The asbestos abatement entity shall record the following information for each project:

6.2.1 Name and address of supervisor responsible;

6.2.2 The location and description of the project and the estimated amount of asbestos removed;

6.2.3 Starting and completion date. If the completion date differs from that originally scheduled, include reasons for delay;

6.2.4 Summary of the procedures used to comply with all applicable requirements, including copies of all notifications, if applicable;

6.2.5 Name and address of the waste disposal site and disposal receipts, including the amount of asbestos-containing material disposed; and

6.2.6 Results of all air sampling conducted during the asbestos abatement project, if applicable, including personal, area, and clearance samples.

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